With Dr Pazzotti's Compliments

TEIGNMOUTH

LOCAL BOARD.

Medical Officer's

Annual Report

FOR

1893.

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ERRATA.

Under the heading "Infectious Disease," first paragraph it should read "As shewn in Table B, page 7," not page 1.

Under the heading "Water Supply" page 16, second paragraph, the last word should be "prevented" not "permitted."

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MEDICAL OFFICER'S
ANNUAL REPORT
FOR 1893.

Presented February 27th, 1894, to the

TEIGNMOUTH URBAN SANITARY AUTHORITY.

METEOROLOGICAL.

As in previous years Dr. W. C. Lake has kindly allowed me to extract from his register the figures given below; and I have added a few brief notes on the most striking facts brought out by an examination of the tables.

Two points are very prominent in the meteorological history of the past year, viz: drought and heat. Mean humidity was below the average in every month save October and December, especially so in April and in June. The total annual rainfall was, for the second year in succession, markedly deficient, falling short of the average by no less than 10·95 inches: the most prolonged drought was from March 1st to May 15th, during which period of eleven weeks an aggregate of only 0·46 inches fall on eight days; from May 16th to 20th rain fell daily, the amount for the five days being 1·1 inch, and then ensued another drought, of 31 days duration, the fall being only 0·09 inch on three days. The month of August also was abnormally dry. In February, July and December, however, the rainfall exceeded the average. The total number of wet days, *i.e.* days on which more than 0·01 inch of rain fell, was 29 below the average, and corresponded exactly with the number in 1892, when the total fall was also deficient to practically the same extent as in 1893: the readings of the guage at Woodlands being:—for 1892, 23·31 inches; for 1893, 23.79 inches.

Mean temperature exceeded the average throughout the year, with the exceptions of January and November, the excess being most marked in April (5·6) and in May (4·4). A temperature of 70 degrees in the shade was exceeded on no less than 74 days, distributed as follows:—four in April, eight in May, fifteen in June, twelve in July, twenty-four in August and eleven in September, the maximum for the year, 82·3 being recorded on June 19th. The mercury fell to or below the freezing point on nine days in January, two in February, four in March, two in November and six in December, and reached its minimum, 18 degrees, on January 3rd.

Snow fell on only two days, one in January and one in November Appended are the usual meteorological tables:—

Meteorological Readings for the Year.

1893	Temperature in Shade.					Mean Humidity Saturation—100	Total rain in inches			No. of Wet days Woodlands.
	Mean Temperature	Highest Maximum	Lowest Minimum.	Mean of all Maxima.	Mean of all Maxima.		Teignmouth Infirmary 38ft	Bonnicliff 260 feet.	Woodlands 98 feet.	
January	39·2	52·8	18·0	43·6	35·0	86	3·05	3·19	2·83	14
February	44·0	54·2	30·7	48·9	39·1	84	4·43	4·87	4·72	23
March ...	47·2	60·0	30·5	54·8	39·6	81	0·11	0·11	0·12	4
April ...	53·4	73·3	32·8	62·5	44·3	66	0.34	0·35	0·37	3
May ...	57·5	73·8	42·3	65·3	49·7	72	1·17	1·31	1·19	7
June ...	61·9	82·3	43·9	70·7	53·1	64	0·56	0·64	0·64	10
July ...	63·1	79·6	51·0	69·4	56·9	74	3·45	3·49	3·61	15
August ...	64·8	80·1	50·8	72·3	57·4	76	0·85	0·99	0·93	10
September	59·1	77·5	37·8	66·8	51·5	79	1·15	1·32	1·28	13
October...	52·5	64·4	33·5	59·0	46·1	89	1·61	1·96	2·01	18
November	44·1	62·7	30·6	49·2	38·9	85	1·64	1·90	1·88	13
December	43.2	56·1	23·5	48·5	37·9	89	3·57	4·41	4·21	16
							21·93	24·54	23·79	146

Averages of the Meteorological Readings for the last Twenty Years,

Summary of last Twenty Years 1873 to 1892.	Temperature in the Shade.					Mean Total Rain in Inches.	Mean Number of Wet Days.
	Meam Temperature.	Highest Maximum.	Lowest Minimum.	Mean of all Maxima.	Mean of all Maxima.		
January ...	41·3	64·4	18·7	46·2	36·5	3·09	16
February ...	42·5	56·8	25·8	47·6	37·6	2·61	13
March ...	43·5	61·6	22·4	49·6	37·3	2·32	13
April ...	47·8	66·5	31·1	54·3	41·0	2·53	13
May ...	53·1	76·3	33·8	60·1	45·6	2·18	14
June ...	58·9	79·5	42·3	65·9	51·5	2·37	13
July ...	61·2	82·4	46·0	68·5	54·2	2·51	13
August ...	61·1	77·7	42·4	67·7	54·5	2·69	14
September ...	58·2	74·8	37·8	65·0	51·3	2·60	13
October ...	51·4	66·8	30·6	57·2	45·6	4·57	18
November ...	46·3	60·8	28·6	51·6	41·2	3·81	17
December ...	42·1	53·1	24·1	46·8	37·4	3·46	18
						34·74	175

VITAL STATISTICS.

As explained in a former report, local circumstances render it improbable that the previous intercensal decrease of population, amounting to 181 persons, is continuing: I have therefore again taken as the basis of my calculations for the past year, the figures of the 1891 census. The population of Teignmouth, thus estimated, at the middle of 1893, was 6,886. The "Natural Increment" for the year was 30.

The total number of Births in Teignmouth registered during the year was 161, comprising 80 of male and 81 of female children; this gives a Birth Rate of 23·38, a number which practically coincides with that of the previous year, 23·23, and is but very slightly below the average for the preceeding ten years, 23·65.

The total number of Deaths in Teignmouth registered during the year was 131 (males 62, females 69) giving a total annual Death Rate of 19·02 as compared with 21·49 for 1892, and 18·19 for the preceding ten years. But of these deaths, 13 were of visitors as distinguished from settled inhabitants, and I, as usual, deduct these from the above total mortality for the purpose of determining the actual death rate which is thus found to be 17·14 as compared with 20·85 in 1892. Two deaths were uncertified.

In the case of Shaldon also the return of the last census is taken as the estimate of population at the middle of 1893. This number is 1285. The natural increment was eleven. The registered Births numbered 32, (males 17, females 17), giving a Birth Rate of 24·90 as compared with 23·34 in 1892 and 24·47 the decennial average. The registered Deaths numbered 21 (males 7, females 14), equivalent to a death rate of 16·34 as compared with 17·84 in 1892 and 17·23 the decennial average.

The above facts are embodied in the following table:—

LOCALITY.	Area in Acres.	Estimated Population in middle of 1893.	Birth Rate 1892	Birth Rate 1893	Birth Rate average for 10 years 1883 to 1892.	Death Rate 1892	Death Rate 1893	Death Rate average for 10 years 1883 to 1892.
Teignmouth...	1073	6886	23·23	23·38	23·65	21·49	19·02	18·19
Shaldon	562	1285	23·34	24·90	24·47	17·84	16·34	17·23

The deaths of children under one year of age, including premature births, numbered twenty-seven in Teignmouth and three in Shaldon, giving as the rates of infant mortality, per 1000 of registered births, 168 and 94 respectively; the corresponding rates for 1892 were 131 and 100, and the averages for the previous ten years were 138 and 89.

The statistical tables supplied by the Local Government Board are here submitted, Table A deals with the mortality of the several divisions which make up the district, shewing the number of deaths from certain diseases classified according to their occurrence above or below the age of five years. Table B includes all those cases of sickness which come within the provisions of the Infectious Diseases (Notification) Act, 1889.

(*A*). *Table of Deaths during the Year* 1893, *in the Urban Sanitary District of Teignmouth, classified according to Diseases, Ages, and Localities.*

NAMES OF LOCALTTIES adopted for the purpose of these Statistics; public institutions being shown as separate localities. (*Columns for Population and Births are in Table B.*) (*a*)	Mortality from all causes at subjoined Ages.							(*i*)	Mortality from subjoined causes, distinguishing Deaths of Children under 5 years of age												
	(*b*) At all ages	(*c*) Under 1 year	(*d*) 1 & under 5	(*e*) 5 & under 12	(*f*) 15 & under 25	(*g*) 25 & under 65	(*h*) 65 & upwards		Diphtheria	Membranons Croup	Fever—: Enteric or Typhoid	Fever—Puerperal	Whooping Cough	Diarrhœa and Dysentery	Rheumatic Fever	Phthisis	Bronchitis, Pneumonia & Pleurisy	Heart Disease	Injuries	All other Diseases	TOTAL.
								Under 5	3	1	—	—	5	1	—	—	4	—	—	20	34
Teignmouth	121	27	7	4	11	26	46	5 upw'ds	1	—	3	2	—	1	1	16	8	12	2	41	87
								Under 5	—	—	—	—	—	—	—	—	—	—	—	4	4
Shaldon	21	3	1	2	0	4	11	5 upw'ds	—	—	—	—	—	—	—	—	6	—	—	11	17
								Under 5	—	—	—	—	—	—	—	—	—	—	—	—	
Teignmouth Infirmary	10	—	—	—	5	2	3	5 upw'ds	—	—	—	—	—	—	—	1	—	2	3	4	10
								Under 5	3	1			5	1			4			24	38
TOTALS	152	30	8	6	16	32	60	5 upw'ds	1		3	2		1	1	17	14	14	5	56	114
The subjoined numbers have also to be taken into account in judging of the above records of mortality.																					
								Under 5	—	—	—	—	—	—	—	—	—	—	—	—	—
Deaths occuring within the District among persons not belonging thereto	13				5	4	4	5 upw'ds	—	—	—	—	—	—	—	1	—	5	5	2	13

(B.) *Table of Population, Births, and of New Cases of Infectious Sickness, coming to the knowledge of the Medical Officer of Health, during the year* 1893, *in the Urban Sanitary Listrict of Teignmouth ; classified according to Diseases, Ages and Localities.*

NAMES OF LOCALTTIES adopted for the purpose of these Statistics; public institutions being shown as separate localities. (*a*)	Population at all ages.		(*d*) Registered Births	Aged under 5 or over 5. (*e*)	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health.												
	(*b*) Census, 1891	(*c*) Estimated to middle of 1893			Smallpox	Scarlatina	Diphtheria	Membranous Croup	FEVERS: Typhus	FEVERS: Enteric or Typhoid	FEVERS: Continued	FEVERS: Relapsing	FEVERS: Pnerperal	Cholera	Erysipelas		
Teignmouth	6886	6886	161	Under 5	—	—	3	—	—	—	—	—	—	—	—	—	—
				5 upw'ds	—	8	10	—	—	9	—	—	1	—	7	—	—
Shaldon	1285	1285	32	Under 5	—	1	—	—	—	—	—	—	—	—	—	—	—
				5 upw'ds	—	13	—	—	—	1	—	—	—	—	4	—	—
TOTALS	8171	8171	193	Under 5		1	3										
				5 upw'ds		21	10			10			1		11		

The various diseases which proved fatal during the year are set forth more fully in the following tables, the deaths being classified according to the ages at, and the months during which they occurred.

Mortality from all Causes arranged under the Ages at which Death occurred.

TEIGNMOUTH 1893.

DISEASE.	under 1 year	1 to 5	5 to 15	15 to 25	25 to 60	60 & up.	TOTAL.
Whooping Cough	3	2	—	—	—	—	5
Diphtheria	—	3	1	—	—	—	4
Enteric Fever	—	—	1	2	—	—	3
Diarrhœa	1	—	—	—	—	1	2
Puerperal Fever	—	—	—	2	—	—	2
Rheumatism...	—	—	1	—	—	—	1
Cancer	—	—	—	1	2	4	7
Tubercular Meningitis	1	—	—	—	—	—	1
Phthisis	—	—	1	2	11	2	16
Tuberculosis (other forms of)	4	—	—	3	1	1	9
Debility from Birth	7	—	—	—	—	—	7
Spina Bifida	1	—	—	—	—	—	1
Old Age	—	—	—	—	—	12	12
Apoplexy, Paralysis	—	—	—	—	1	7	8
Other Nerve Diseases	1	1	—	—	4	—	6
Heart Disease	—	—	—	1	3	8	12
Croup	—	1	—	—	—	—	1
Bronchitis	3	—	—	—	—	5	8
Pneumonia, Pleurisy	1	—	—	—	1	2	4
Disease of Stomach and Intestines ...	5	—	—	1	1	3	10
Disease of Liver	—	—	—	—	1	—	1
Disease of Kidneys	—	—	—	—	—	1	1
Accident	—	—	—	3	2	—	5
Influenza	—	—	—	—	1	1	2
All other Diseases	—	—	—	1	—	2	3
TOTAL	27	7	4	16	28	49	131

Mortality from all Causes, arranged under the months during which the Deaths were registered.

TEIGNMOUTH, 1893.

DISEASE.	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
Whooping Cough	—	—	2	2	1	—	—	—	—	—	—	—	5
Diphtheria	—	—	1	—	1	1	1	—	—	—	—	—	4
Enteric Fever	1	1	—	—	—	—	—	—	—	—	1	—	3
Diarrhœa	—	—	—	—	—	1	—	—	—	1	—	—	2
Puerperal Fever	1	—	1	—	—	—	—	—	—	—	—	—	2
Rheumatism	—	—	—	—	—	—	—	—	—	—	—	1	1
Cancer	1	1	1	1	1	—	1	—	—	—	1	—	7
Tubercular Meningitis ...	—	—	1	—	—	—	—	—	—	—	—	—	1
Phthisis	3	1	1	3	1	1	2	—	—	2	2	—	16
Tuberculosis (other forms of)	—	1	2	1	1	—	—	—	—	3	1	—	9
Debility from Birth ...	—	—	1	—	—	1	—	2	1	—	1	1	7
Spina Bifida	—	—	—	—	—	1	—	—	—	—	—	—	1
Old Age	1	—	—	1	1	—	2	1	—	—	1	5	12
Apoplexy, Paralysis ...	2	1	1	—	1	—	—	—	1	—	—	2	8
Other Nerve Diseases ...	—	—	—	2	1	1	1	—	—	—	—	1	6
Heart Disease	2	2	—	—	1	1	—	—	1	2	2	1	12
Croup	—	1	—	—	—	—	—	—	—	—	—	—	1
Bronchitis	2	—	1	2	1	—	—	—	—	1	—	1	8
Pneumonia, Pleurisy ...	—	1	1	—	—	—	—	—	—	1	—	1	4
Disease of Stomach & Intestines	1	—	—	2	1	2	2	—	2	—	—	—	10
Disease of Liver ...	—	—	—	—	—	—	—	—	1	—	—	—	1
Disease of Kidneys ...	—	—	—	—	—	—	—	—	—	1	—	—	1
Accident	1	2	—	1	—	—	—	—	1	—	—	—	5
Influenza	—	—	—	1	—	—	—	—	—	—	—	1	2
All other Diseases ...	1	—	—	—	—	—	—	1	—	1	—	—	3
TOTAL ...	16	11	13	16	11	9	9	4	7	12	9	14	131

In the foregoing tables there are one or two points worthy of note:—

(a) The infant mortality is high, the causes responsible for this being Whooping Cough, Tubercle in one or other of its forms, and bowel complaints, some of which should perhaps more properly appear under the head of Diarrhœa.

(*b*) An unusually large number of deaths from zymotic diseases has to be recorded; and out of the total of 14, no less than 4 are attributable to Diphtheria, a disease which, so far as my investigations go, has never before caused so heavy a mortality in this district. The zymotic death-rate is 2·03 per 1,000, a less favourable figure than that for 1892, which was 0·73, and also comparing unfavourably with the decennial average of 1·23. The incidence of the various infectious diseases will be considered below. The usual table dealing with zymotic mortality is given here

Shewing the number of Deaths from the Principal Zymotic Diseases during the year 1893, *and during the Ten Years*, 1883 *to* 1892.

TEIGNMOUTH.

Disease.	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	Annual Average of 10 years 1883-1892.	*Average Death Rate per 1,000 for 10 years 1883-1892.	Deaths in 1893	Death Rate per 1000 in 1893.
Measles ...	2	—	—	—	—	—	17	—	1	—	2·0	·29	—	—
Scarlatina ...	—	—	4	—	1	—	—	—	—	—	·5	·07	—	—
Diphtheria ...	1	1	—	1	—	—	1	1	—	—	·5	·07	4	·58
Whooping Cough	1	2	1	1	8	1	1	3	—	—	1·8	·26	5	·73
Enteric Fever ...	2	1	2	2	3	2	1	2	1	3	1·9	·27	3	·43
Diarrhœa ...	3	3	1	4	2	—	—	4	—	2	1·9	·27	2	·29
TOTALS ...	9	7	8	8	14	3	20	10	2	5	8·6	1·23	14	2·03

*This Average is calculated on the number 6949 which represents the estimated population at the middle of the decennial period, *i.e.*, at the end of 1887.

(*c*) PUERPERAL FEVER. The two deaths appearing under this head were certified as due to "Child-birth: Peritonitis (7 days)" and "Parturition: Septicœmia, Pelvic Peritonitis (22 days)" respectively; but facts, to be subsequently referred to, came to my knowledge, which suggest that the classification here adopted is the correct one.

(*d*) The number of deaths (16) from Phthisis is again excessive, being 57 per cent. above the decennial mean (10·3). There is also a marked increase in the mortality from other forms of tuberculosis: in the aggregate 26 deaths were ascribed to these causes, equivalent to nearly 20 per cent. of the total mortality.

(*e*) Epidemic Influenza was primarily responsible for two deaths, as compared with 10 in 1892, and was returned as the secondary cause in one case (in April).

Mortality from all Causes arranged under the Ages at which Death occurred

SHALDON 1893.

Disease.	under 1 year	1 to 5	5 to 15	15 to 25	25 to 60	60 & upw'rds	Total
Cancer	—	—	—	—	2	—	2
Tuberculosis	1	—	—	—	—	—	1
Debility from Birth	1	—	—	—	—	—	1
Old Age	—	—	—	—	—	5	5
Diseases of Nervous System	1	1	1	—	—	—	3
Bronchitis...	—	—	—	—	—	6	6
All other Diseases	—	—	1	—	2	—	3
TOTAL	3	1	2	0	4	11	21

Mortality from all Causes arranged under the Months during which the Deaths were registered.

SHALDON 1893.

DISEASE.	January	February	March	April	May	June	July	August	September	October	November	December	Total
Cancer	—	—	—	—	—	—	—	—	1	1	—	—	2
Tuberculosis	—	—	—	—	—	—	—	1	—	—	—	—	1
Debility from Birth ...	—	—	—	—	1	—	—	—	—	—	—	—	1
Old Age	—	2	1	—	—	—	—	—	—	—	—	2	5
Diseases of Nervous System	—	1	1	—	—	—	—	—	1	—	—	—	3
Bronchitis	1	—	2	1	1	—	—	—	1	—	—	—	6
All other Diseases	—	—	—	1	—	—	—	—	—	—	2	—	3
TOTAL	1	3	4	2	2	0	0	1	3	1	2	2	21

In the Shaldon tables the noteworthy points are:—

(*a*) The absence of Zymotic diseases and of Phthisis from the list of causes.

(*b*) The fact that more than 50 per cent. of the total mortality occurred among aged persons.

Having now separately dealt with the two localities which make up the district, I append the figures for the whole Urban Sanitary District.

The estimated population is 8,171.

Number of Births, 193; Birth-rate, 23·61.

Number of deaths, 152; total Death-rate, 18·60, or, excluding deaths of visitors, 17·01.

Zymotic Death-rate, 1·71.

Infantile Death-rate, 155·44 per 1,000 births.

INFECTIOUS DISEASE.

As shewn in Table B, page 1, the total number of cases notified under the Act of 1889 has been 57, as compared with 39 in 1892 and 37 in 1891 and in 1890. Of these 22 were cases of Scarlatina, 14 of Diphtheria, 10 of Enteric Fever, one of Puerperal Fever, and 11 of Erysipelas.

SCARLATINA.—Of the 22 cases notified only eight occurred in Teignmouth. After being absent since September, 1892, the disease was imported in a visitor's family in March, during which month a second case was also notified. The disease then disappeared for six months, to be again introduced by visitors in September. Two cases which occurred amid dangerous surroundings, the one in a hotel, the other in a boarding school, were removed from the district immediately the nature of their disease was recognised ; and in neither instance, thanks to the careful disinfection carried out by the Sanitary Inspector, was there any subsequent extension. Generally the cases have been very mild, and the power of diffusion apparently but slight.

Fourteen cases have occurred in Shaldon during the last quarter, the first, in which there was strong probability of imported infection, was notified on October 7th. The above remarks as to mildness of attack and of infective power apply equally to Shaldon. Neither milk supply nor School attendance appear to have been important factors in facilitating diffusion. Nine of the 14 cases occurred in three households. The mortality was nil.

Diphtheria.—The incidence of this disease has been heavier than for very many years, no less than 13 cases having been notified, of which 4 proved fatal. (Tracheotomy was certified as the "Secondary cause" in two of these.) The dates of notification were Feb. 7th, March 16th, 22nd and 24th, April 24th and 25th, May 5th, June 22nd, July 21st, August 18th, September 28th (2 cases), and October 5th. The difficulties so frequently experienced in determining the causation of an outbreak of Diphtheria have been very apparent: the most careful investigation having failed to discover any factor common to more than two or three cases. The dates above given are in themselves sufficient to shew that direct infection has not had much to do with either the spread of the disease or its nine months' hold on the district. Similarly school attendance appeared to be without influence; for 6 of the cases were adults, and the remaining seven children attended various schools. Milk supply also was very diverse. In nearly every instance, Sanitary defects, usually of a grave nature, were found in the infected houses, but in the present state of our knowledge such defects cannot in my opinion be regarded as causative of Diphtheria, though by lowering the general health they may undoubtedly tend to render the system more liable to the attacks of the specific infection.

It should be noted that the death of a child at 12 months, from "Croup" was registered in February: that in the second notified case of diphtheria there was just a possibility of infection from without the district: and that the average age of the four fatal cases was four years.

Enteric Fever.—Nine cases, with three deaths, have to be recorded in Teignmouth, and one, nonfatal, in Shaldon, in each instance a much smaller number than usual. There is nothing calling for special remark in connection with this disease, except that, as usual grave sanitary defects were nearly always found on inspection Typhoid fever is essentially a type of the class of preventable diseases. A pure water supply and healthy homes are all that are required to banish the disease from our midst.

Puerperal Fever.—One case was notified on March 16th and died on the 21st: upon enquiry I ascertained that the patient had been attended at her confinement on 27th February by a midwife (untrained), who on 10th January, assisted, in the same capacity, a poor woman who died on 17th January of "Childbirth: Peritonitis." The same midwife also attended, early in January, another woman, who suffered severely from a prolonged attack of septic peritonitis. On the strength of these facts I warned the midwife in question to abstain from following her avocation for a period of three months. It is worthy of remark that only one of the above cases was notified; there being great diversity of opinion among medical practitioners as to what constitutes "Puerperal Fever."

ERYSIPELAS.—The 11 cases notified call for no special remark· 4 of them occurred in Shaldon. Practically the only benefit accruing from the notification of this disease is that the attention of the Sanitary Authority is thereby called to sundry defects which otherwise might escape detection.

WHOOPING COUGH of a somewhat severe type was widely prevalent during the Spring, and caused five deaths. It came to my knowledge in April that children suffering from this highly contagious disease were being compelled by the Attendance Officer to attend school. The School Board was communicated with, and the practice was promptly discontinued.

DIARRHŒA.—There has been nothing like the usual prevalence of summer diarrhœa, which I am inclined to attribute to the disuse of the water from the Coombe Brook, the direct action of which in causing an explosive outbreak was fully dealt with in my report of 1892.

EPIDEMIC INFLUENZA.—A considerable number of cases occurred in the Spring, and in April one death was registered from this disease, while in another it was certified as the secondary cause; it did not, however, at this time assume epidemic proportions. In December it reappeared and rapidly diffused itself throughout Teignmouth, while Shaldon remained quite free. The type was certainly less severe than in previous epidemics; the mode of onset—with sore throat or abdominal symptoms—was also different; the tendency to pulmonary complications has been much less marked; and the subsequent debility is apparently less prolonged. At the end of the year the disease was still spreading. It is interesting to note that public belief in the extremely infectious nature of Influenza is becoming almost universal.

CHOLERA.—No case has occurred in the district. Several addresses of persons belonging to the locality who have disembarked from infected vessels at various ports, have been received from the Sanitary Authorities concerned, and such persons have been kept under observation on arrival. It may be noted that in two instances the addresses forwarded were inaccurate. It is my duty to remind the Board that the special measures of preparation and precaution which were adopted in September, 1892, have never been very energetically carried out. The danger still continues, and its reality during the coming year cannot be too strongly insisted on. Foci of choleraic infection undoubtedly exist at Hull, Grimsby, London, and other places with which we are in constant communication; fish comes to us from Grimsby in considerable quantities. It is a matter of the first importance that we make good our defences beforehand, and I would therefore urge the Board to again consider my report of September 6th, 1892, and to systematically and persistently carry out the precautionary measures therin recommended.

THE NOTIFICATION ACT continues to work satisfactorily, and I am much indebted to my brother practitioners for their courteous assistance in facilitating the necessary subsequent action. So far, however, as notification by the householder is concerned, the Acts remains a dead letter. The enquiry forms have afforded valuable information, and the printed "instructions for preventing the spread of" various infectious diseases have undoubtedly done useful service: while the practice of preventing children in infected houses from attending school has, in my opinion, done much to diminish the danger of a very fertile cause of disease diffusion.

Isolation Hospital Accommodation.—The only step taken in connection with this important matter, so far as the Urban district is concerned, is that the Sanitary Authority has abandoned the policy with which it has hitherto met the inquiries and recommendations of the Local Government Board, and has candidly stated its opinion, having regard to the existing financial charges upon the town "that the present building is sufficiently satisfactory for those purposes for which the Local Government Board can call upon the Local Board to provide hospital accommodation," that is to say for the Port Sanitary district: at the same time the Local Board has admitted that "it is fully conscious from a Sanitary point of view of the necessity for the provision of a permanent Isolation hospital, and of the inconvenience of the present temporary hospital."

Of the overburdened condition of the rates I am well aware, and the urgent necessity of economy, in view of our projected large expenditure on water supply, must be evident to all; but there is such a thing as false economy, and Teignmouth will have paid very dearly for its insufficient hospital accommodation if, for want of suitable provision for isolating the earlier cases, disease should spread, and the district be visited by a serious epidemic. If the town is to advance in public estimation as a health resort it is essential that we should possess the machinery for dealing with the first appearances of dangerous infectious disease.

The existing hospital building has been specifically set apart for the reception of cases of illness occurring in the Port Sanitary District, with the understanding that, when not so utilised, it shall be available for cases from the Urban District. It is my duty here to point out, as I have already done to the Board, that such an arrangement possesses all the conditions necessary for a dead lock. Should the hospital be occupied by Urban cases when it is required for the accommodation of a Port patient suffering from a different disease, the Board will be placed in a very difficult position: for as I have repeatedly pointed out, and my opinion has been strongly supported by Dr. Bulstrode during his recent visits, the structural conditions of the building are such as to render it impossible to satisfactorily isolate at the same time more than one infectious disease.

No attempt has been made, despite frequently reiterated recommendations, to provide a suitable form of disinfecting apparatus, the need for which may at any time be severely felt.

WATER SUPPLY.

The hours of Water Supply to Teignmouth during 1893 were as follows; on the low level:—

January 1st to January 8th—Continuously.

January 9th to January 20th—15 hours.

January 21st to January 27th—Continuously.

January 28th to February 4th—15 hours.

February 5th to February 7th—Continuously.
February 8th to March 6th—15 hours.
March 7th to April 7th—Continuously.
April 8th to May 6th—12 hours.
May 7th to May 27th—11 hours.
May 28th to June 6th—10 hours.
June 7th to June 17th—9 hours.
June 18th to August 14th—7 hours.
August 15th to September 4th—6½ hours.
September 5th to September 8th—5 hours.
September 9th to September 30th—1 to 2 hours in sections
October 1st to October 7th—3 hours.
October 8th to December 2nd—4 hours.
December 3rd to December 18th—5 hours.
December 19th to December 31st—6 hours.

On the high level the period of supply has been five hours for each section.

From the above tabulated statement it is clear that during August, September and October, when the ordinary population is largely augmented by numbers of visitors, the supply of water was deficient: at the beginning of September owing to the very heavy demands universally made upon the supply the pressure in the mains was found insufficient to force the water to the upper floors of houses; indeed for over a week, many dwellings received no water at all. The Sanitary Authority did its best to remedy the evil by dividing the town into districts, and each district into small sections, only one of which was supplied at a time. Nevertheless some local scarcity was unavoidable; of course the condition of unprecedented drought must be taken into account; in many other towns the want of water was far more severely felt than here · but, admitting all this, the past year has furnished us with unquestionable proof of the insufficiency of our present water supply. Another consequence of the limited daily period of supply must here be referred to: in the poorer districts, where cisterns are either very small or altogether wanting, it becomes necessary for consumers to draw a sufficient quantity for 24 hours' requirements while the water is on: and this is stored in pans, buckets, jugs, etc., which are frequently placed in situations where they are liable to various kinds of pollution. The well at Mylor, upon which alone we have depended since July, has stood the heavy demand made upon it in a far more satisfactory manner than could have been anticipated: reliable figures as to the yield of the well during the period of greatest scarcity (September) are unfortunately wanting: it was estimated by the late Surveyor as supplying 12½ gallons per head per diem during that month. At the present time the yield is about 60 gallons per minute, which gives a population of 7000 persons 12·3 gallons per head per diem.

As implied above, the water from the Coombe Brook, which was responsible for the epidemic of diarrhœa in 1892, has not been used at all during the latter part of the year. It had previously been always shut off during rain and not readmitted until its impurities were found on analysis to be reduced to a minimum : it was finally shut off on July 17th, and since that date has not been allowed to enter the mains.

The excessive growth in the Lower Reservoir of the so-called "water bloom" which was doubtless caused by the phenomenal and long continued heat of last summer, resulted in some temporary pollution of the water ; this was promptly and effectually dealt with by emptying the reservoir, cleansing the surface of the filter bed, and lime washing the sides. Short of roofing in the whole area I know of no method by which this growth can be permanently permitted.

The filter beds at Coombe were cleaned out in February ; they were very dirty, and their reconstruction was not carried out in a manner which I can regard as quite satisfactory : however, they have been but little used since, and your present Surveyor is about to thoroughly reorganise them, using polarite as a filtering medium and automatically regulating the intake from the Coombe Brook ; by which means we shall probably be enabled to avail ourselves of this source of supply almost constantly throughout the coming year.

The Lower Reservoir in Landscore Road is also supposed to do duty as a filter, its floor being covered by a bed of flints, gravel and sea sand. This was also cleansed in February, but the filtering medium was relaid in a manner no more satisfactory than at Coombe. I have on a previous occasion (Annual Report for 1892 ; p. 25) criticised this attempt to combine a reservoir with a filter, and I now desire to emphatically call attention to the fact that it is impossible, even with an ideally constructed filter bed on the floor of the Lower Reservoir, to secure there efficient filtration : a filter so situated is worse than useless because it engenders a false sense of security. The essential conditions of successful filtration have long been approximately known : they depend upon the area, depth, and constitution of the filter bed, upon the pressure of water and upon the rate of flow through the filter. The recent researches of Koch into the connection of the outbreaks of Cholera at Hamburg and Altona and at Nietleben respectively with water supply have conclusively established that the last two factors, viz : pressure and rate of filtration, are of paramount importance ; there is no possibility of regulating either at the Landscore reservoir. I would, therefore, earnestly recommend the Board to remove this filter bed entirely, and to limit the use of the reservoir to its sole proper function—that of storage. There is yet one more powerful argument in favour of such a course; the brook water will, when the works at Coombe are completed, be efficiently filtered there; the water from the well is beautifully pure and requires no filtration at all. Is it worth while passing a pure supply of water through an inadequate and faulty filter which must pollute it in transit ? As I have pointed out on previous occasions the water has been found by analysis to be more impure after it has passed through the filter at Landscore than before. I invite the Board's careful consideration to this important matter, for some years must elapse before the full benefit is derived from any new scheme which may ultimately be adopted for providing a constant supply; in the meantime it behoves us to utilise to the fullest possible advantage those sources which are at present available. In this connection I desire to refer to the question of waste. Two of

Deacon's Waste Water Meters were fixed on the mains in 1887, and, at considerable expense, the supply pipes of most of the houses on the low level system were fitted with stopcocks. Very slight use has been made of the powerful machinery thus provided for the detection of waste; indeed, during the past two years the meters have been, to the best of my belief, entirely neglected. They are now being overhauled by your Surveyor, and it is important that regular and systematic inspection of fittings should be carried out.

A further valuable measure of water economy may here be suggested for careful consideration. At Tynemouth, Shields, Ryde, and other towns sea water is used with satisfactory results for flushing the sewers. I am aware that locally there is an objection to its use for this purpose, but such objection has never been put in very definite terms. Moreover, during last summer it was so used locally to a slight extent. If generally adopted here a large quantity of water would be saved and become available for more urgent requirements.

With respect to the provision of a constant supply by gravitation, the Board has had several schemes under consideration. Negotiations are at present in progress with the owner of Leighon, above Becky Falls (Mr Bertram Nichols' scheme); with the Duchy of Cornwall with a view to taking water from Wallabrook as suggested some years since by Mr. Martin; while the merits of the proposed supplies from Harcombe and from Fairwater have also been investigated. All these sources have been visited by the Water Committee. Whatever scheme may ultimately be adopted, the need for the avoidance of any unnecessary delay is very urgent, and it is mainly with a view of emphasising this fact, and of facilitating an energetic and determined policy on the part of the Board, that I have set forth at such length the unsatisfactory nature of our existing water supply.

The Shaldon water supply continues satisfactory, and has been practically constant throughout the year. The reservoir was cleaned out in February. Three shallow wells in Shaldon were closed in the early part of the year, but no further action has been taken with respect to other wells on account of the Bench of Magistrates having recommended "that in all further cases an analysis by a well-known analyst should be obtained by the Local Board." The examination of Shaldon wells, and the application to them, when necessary, of sections 70 and 62 of the Public Health Act, 1875, should be perseveringly carried out.

The Coombe Brook water has been analysed on 27 occasions with a view to deciding its fitness for use. Eight analyses of other waters have also been made, but without necessitating any subsequent action.

The importance of frequent periodical cleansing of cisterns again needs to be brought prominently forward. The public, generally, seems utterly to fail to realise the great facilities for pollution of water which are afforded by the domestic storage cistern. I would recommend the Board to again issue the printed notice to householders which was distributed in April, 1892, calling attention to the above facts.

DRAINAGE.

Four new 9.inch main sewers have been laid during 1893. The Dawlish Road sewer has been carried up from its previous termination at St. Clair to the top of the hill where it is now joined by the surface water drain which carries the sewage of the Cross Park houses; a surface ventilator has been placed at the junction. The private road known as Reed Vale has been efficiently sewered under the provisions of the Private Streets Works Act, 1892. A new main has been laid across the Den, and the drains from the Pier connected therewith.

On the Shaldon side, a new sewer has been constructed in the Coombe Road as far as the top of the hill, and has been connected, at its lower end, with the new outfall pipes laid in 1892. The surface water main which discharges on the beach at Eastcliff has been finally cleared of sewage by the disconnection of two house drains in Spring Gardens which were found connected with it, and by the inclusion of the Cross Park houses in the general scheme of the district, as noted above.

Complaints having been received from the Harbour Commissioners that a bank was forming in the river at the main outfall at Gale's Hill, and that the iron pipes at the said outfall constituted a danger to navigation owing to their not being buried on the foreshore, it has been decided to lower the pipes and to alter the direction of the outflow; while the steam dredger is to be hired to remove the bank already formed. Owing to some irregularity in management, considerable nuisance was caused in the summer by the sewage passing up the river on the flood tide: to obviate this the Board, in September, gave instructions that the penstock at the sewage tank should be invariably closed one hour before the end of the ebb, and the sewer men were provided with tide tables to enable them to accurately perform this duty. The pipes of the Shaldon outfall have again been disturbed by a vessel and have been since relaid. It having been reported to the Board that the workmanship in laying certain new sewers was of an unsatisfactory character, it was resolved in February that all junctions should be made by skilled workmen, and nothing but cement used for the purpose.

The scarcity of water during the past year caused the arrangements for flushing the sewers to be somewhat unsatisfactorily carried out; and this gave rise to considerable nuisance. The smells arising from the Coombe Brook at Lower Bitton, and throughout the course of the Dawlish Road sewer, especially from the surface ventilator at the summit, have been very offensive at times, and complaints by letter, memorial and deputation have been frequent. The Board has given its careful consideration to this matter, and has ultimately decided to allow the patentee to fix one of Arnold's deodorisers beneath the surface ventilator at the top of the Dawlish Road. This apparatus has for some time been satisfactorily working at Plymouth, and should the trial now contemplated prove successful, it is probable that the system will be adopted here. It must not, however, be allowed to divert attention from the larger question of general sewer ventilation; which at the present time is undoubtedly insufficient. The question is undoubtedly a difficult one, opinions being greatly divided as to the most successful method of practically carrying it out; but it deserves most careful and persevering consideration by the Board. Personally I consider that surface ventilators, if sufficiently numerous, offer generally the most satisfactory solution of the difficulty; but each sewer must be treated according to the merits of the particular case. A minor cause of nuisance must here be alluded to: during drought the street gully-traps frequently become dry and give vent to bad smells. They should be regularly cleansed and sealed at frequent intervals. There is in existence a resolution dealing with this point, but it has never been generally carried out.

With respect to flushing, I would again refer to the use of sea-water (already mentioned page 17) for this purpose.

The question of sewering Pardise road and the upper part of Ferndale, also Ringmore, which was mentioned in my last report as urgently needing attention has been carefully considered by the Board; plans and specifications have been drawn up by Mr. Bertram Nichols for dealing not only with the above two localities, but also with Coombe Vale (Teignmouth), Cross Park, and a small district on the Old Quay; and application has been made for a loan of £1,600 for these works, which, when completed, will place the whole inhabited portion of the district in connection with one consistent scheme of main sewerage.

With regard to house drains: 8 have been newly connected with the main sewers; 57 have been disconnected by efficient syphon traps; 65 have been satisfactorily ventilated; and in a further 19 instances old defective drains have been replaced by glazed stoneware pipes, while 39 defective drains have been made good. The drains of 66 houses have been subjected to the Smoke test by means of the "Asphyxiator," of which number 63 were found "defective." The total number thus investigated by this invaluable apparatus since the Board purchased it in September 1889 is now 354, among which only 22 have been found smoke-tight. Those householders who have not seen fit to avail themselves of the Board's liberal offer of gratuitous testing may find food for reflection in the statement that the chances are 15 to 1 that sewer gas is escaping into their dwellings.

MISCELLANEOUS.

In accordance with the regulations of the Local Government Board I have made regular systematic inspections of the district. Many of the points which have come under my notice have already been incidentally referred to in my report. I have systematically inspected 59 houses, and such nuisances and defects as have been detected have been periodically reported to the Sanitary Committee and remedied. It is my intention to undertake a house to house inspection of French Street at an early date.

The Sanitary Inspector has been continuously and actively engaged in carrying out the routine duties of his office, and has accomplished a vast amount of most useful work, as the following tabular statement shews:—

Sanitary Inspector's Record of Work during 1893.

	Teignmouth	Shaldon	Total
Complaints received	94	24	118
Houses Inspected	120	24	144
Preliminary Notices issued for work to be done	4	0	4
Formal Legal ditto	22	2	24
Houses Cleaned and Whitewashed	3	2	5
Houses Disinfected	10	2	12
House Drains, Ventilated	55	10	65
House Drains, New Connections to Main Sewers	6	2	8
House Drains, Dis-connected by New Syphon Traps	48	9	57
House Drains, Choked, Remeded	27	0	27
House Drains, New, provided in lieu of old, Faulty	17	2	19
House Drains, Defective, Made Good ...	36	3	39
House Drains, Tested with the "Asphyxiator"	64	2	66
Tested and found Faulty	62	1	63
W.C's. supplied with New Flushing Apparatus	61	23	84
W.C's. New, Provided	8	2	10
W.C's. New, in lieu of old "Pan & Container"	45	0	45
Soil Pipes, Defective, Made Good	30	0	30
New Gully Traps fixed in lieu of old Bell Traps	47	4	51
Cisterns, New, Provided	7	0	7
Cisterns, Cleansed	19	2	21
Ashpits, Repaired	4	0	4
Ashpits, New, Provided	10	0	10
Overflow Pipes, Dis-connected from Drains...	11	1	12
Rain Water Pipes ditto	16	0	16
Removal of offensive accumulations ...	8	3	11
Overcrowding	2	2	4
Receptacles for Manure, Provided	2	0	2
Seizures of Unsound Fish	3	0	3
Other Nuisances	9	3	12
Disinfectants served out gratuitously ...	45	3	48
Letters and Reports Written	...	...	183

I am anxious to place on record my very keen appreciation of this valuable official. He is most assiduous in the discharged of his duties. energetic and pains-taking, yet tactful and considerate for those with whom he has to deal. The town is very greatly indebted to him for much of the undoubted Sanitary progress which has characterised the last few years. In the above tabulated record, I would especially refer to the improvements in house drainage already mentioned, to the number of W.C.'s supplied with flushing apparatus, to the replacement of the oldfashioned and objectionable pan and containers by new Sanitary Closets, and to the repairing of defective Soil pipes. I would also note the yearly increasing amount of attention bestowed upon Shaldon.

The regular house to house inspection, which was inaugurated in 1888, has made no progress, and in my opinion it is impossible for the Sanitary Inspector, with so many and varied calls upon his time, to carry it out in person. I would therefore ask the Board to again consider the recommendation made in my last Annual Report, to temporarily appoint an assistant inspecter to carry out this work, the importance of which cannot be over estimated.

Scavenging and the disposal of the town refuge has been a source of much trouble during the past year. The original agreement with a farmer to remove the refuge daily to his land outside the town failed to work satisfactorily: the traction engine employed caused great annoyance, and nuisances were created in the Board's yard, where refuse was allowed to accumulate for several days together, and also to owners of property adjoining the land upon which the refuse was deposited in huge heaps by the contractor: arrangements were finally made with another farmer to allow the town rubbish to be placed upon his land outside the district and at a distance from any habitation, and to this plan the Board has since adhered. With respect to Scavenging, it has occasionally been very irregular and I have to complain that household receptacles are insufficiently cleansed and never disinfected, notwithstanding the Board's order to the contrary. Your new Surveyor has propounded a scheme for the more regular and systematic scavenging of the district. Covers have been provided for the dust carts, thus obviating the nuisance hitherto caused by refuse being blown from the carts in transit. Notices were issued in March of the intention of the Board to enforce Section 50 of the Public Health Act, 1875, which deals with the regular periodical removal of manure from stables, etc. All such refuse must be removed once a week.

Plans of eleven new buildings have been approved by the Board during the year and a number of others have been refused. Although the attention of builders has quite recently (in December, 1892) been drawn by circular letter to the Bye-laws as a whole, and to certain specified ones in particular, it is very rarely that plans are drawn up in accordance with the regulations: almost invariably they have to be referred back for modification before they can be passed. Moreover there is a tendency to allow certain important Bye-laws to lapse: I refer now especially to the following: No. 93, which compels every builder to give notice in writing to the Surveyor of the date on which he will proceed to cover up any sewer, drain, or foundation: and No. 97, which provides for sending to the Surveyor notice in writing within fourteen days of the completion of any building. In connection with Bye-law 93 I would remind the Board that its resolution passed in January 1890, to the effect that "all drains of new houses are to be tested with the Asphyxiator before being covered in" is a dead letter. I don't think it is ever carried out. The Board has resolved to require that plans of all alterations and additions to existing building be submitted for approval. In May a builder was summonsed for contravention of the Bye-laws, and fined.

Under Section 23 (2) of the Public Health Acts Amendment Act, 1890, the Board has the power of extending certain of the existing Bye-laws as to drains, etc., of New Buildings, so as to affect buildings erected before the time mentioned in Section 157 of the Public Health Act, 1875. The value of such a power is great, and it would be wise to take immediate steps to secure such an important extension of the Bye-laws.

The Private Streets Works Act, 1892, came into operation on February 7th, and as already stated, its provisions have been applied to the Sewering of Reed Vale.

The Infectious Diseases Prevention Act, Section 14, has been systematically carried out in all cases.

The Sale of Food and Drugs Act is practically ignored in this district.

So too, the Bye-laws under the Dairies, Milkshops and Cowsheds Order of 1885 are inoperative, owing to the omission on the part of the Board to make definite arrangements for regular visitation and inspection: I must again urge the need for activity in this matter.

The Order of the Secretary of State under the Factories and Workshops Acts, 1878-1891 has been observed.

Under the Housing of the Working Classes Act, Section 30, the house of No. 46, Teign Street, where Enteric Fever had occurred, was in February represented as unfit for habitation, and was immediately put into satisfactory Sanitary repair by the owner. The house in Dawlish Street which was closed in 1892 has undergone important structural alterations and is now reoccupied. With respect to the eight houses in Globe Lane, which were also closed, plans involving the abolition of two houses and the provision on the space thus available of yards and out-door w.c.'s for the remaining six, have been submitted to me by the owners, and being approved, are now in course of execution.

Three defaulters have been summonsed before the Bench, and convictions were obtained in two instance: the third case failed on a technical point, but the work in question (paving an insanitary backyard) was executed by the defendant before the adjourned hearing. I have personally given evidence in two of the above cases. It is a matter for congratulation that while the amount of Sanitary reform accomplished is greater than ever before, the number of prosecutions is abnormally low; a fact which speaks volumes for the tact and ability of your Sanitary Inspector.

In addition to my regular monthly reports to both the Sanitary Committee and the Board, a special report dealing with Isolation Hospital accommodation was read to the Authority in September, as a result of which a resolution was passed requesting me in future to read all reports to the Sanitary Committee before presenting them to the Board. Such a course will no doubt occasionally save time at the monthly Board meetings, but in so far as it will tend to limit general discussion and public comment upon matters for which such treatment is often the most effectual remedy, it is, in my opinion, greatly to be deprecated.

Application having been made in March that the house known as the White Horse Inn, Teign Street, might be registered as a common lodging-house. it was inspected and reported by me, and, as a result, the application was refused. There is, therefore, no common lodging-house in the district.

The sub-committee appointed in 1892 to consider the subject of Mortuary accommodation, reported in January that the existing building in Lower Brook Street was sufficient for the purpose, provided certain alterations and repairs to drainage and water supply were carried out. With a view of providing a Mortuary which should be available both for Port and Urban districts it was suggested (in May) that the Lower Brook Street property be sold, and a suitable building erected on land to be purchased on or near the Old Quay. Nothing further has been done in the matter, and the existing Mortuary remains untouched; which has led to the Board being again adversely criticised by a Coroner's jury. It is most essential that some action be taken in this matter: the present Mortuary is unfit for use as such, and its continued existence, unless it be improved, is a scandal to the town.

The Sanitary Inspector has regularly visited and inspected the bakehouses and slaughter-houses. The two latter situated in Gale's Hill and Commercial Street respectively have been repaved, and new stoneware gully traps fixed. A new slaughter-house, having been first inspected and approved by me, has been registered. It is situated in the Exeter Road, close to the district boundary, and well removed from all dwellings.

Your Inspector has also inspected the Board Schools in the Exeter Road and Higher Brook Street, and reported thereon to the School Board, which body has, however, only in part carried out the Inspector's recommendations, being advised by their own Surveyor that it was not necessary to remove certain "mason's traps," which were condemned in the report. The Board Schools at Shaldon have been inspected, and important improvements in ventilation and in W.C. accommodation have been effected. The Roman Catholic Schools, Dawlish Street, are, as a result of inspection, now being put into thorough sanitary repair; the Grammar School was similarly treated in September, and has since received the Inspector's certificate.

Your Inspector has prepared a return of houses which let apartments in the town classfied according as they do or do not possess the certificate of perfect sanitation, with the following result: 116 are uncertified, and only 35 certified. It is deeply to be regretted that so very few lodging-house keepers recognise the duty they owe to their tenants of providing them with healthy accommodation; the former appear to be much less particular about the Sanitary condition of their premises than are private householders; and until the visiting public more generally demand that their temporary dwellings shall be sanitarily perfect, it is, I fear, hopeless to expect very much improvement in this respect. Fortunately such a demand is yearly becoming more common.

The district was in August visited by Dr. H. T. Bulstrode, Medical Inspector to the Local Government Board, who, during his stay of three days, thoroughly inspected it. His report had not been received at the end of the year.

F. CECIL H. PIGGOTT, M.D., B.C., AND B.A. CANTAB,

MEDICAL OFFICER OF HEALTH.

January, 1894.

To the Teignmouth Port Sanitary Authority.

On February 17th last, as representative of the Port Sanitary Authority, I attended the Conference held at the Guildhall, London, under the presidency of the Lord Mayor, for the purpose of considering Cholera precautions for 1893: as one result of which Conference, Dr. Collingridge, Medical Officer of Health for the Port of London, has periodically forwarded a list of ports regarded as infected by his own Sanitary Authority, thus securing consistent treatment of such ports by other Authorities throughout the country. For this gratuitous information our thanks are due to both Dr. Collingridge and the Authority for which he acts. All vessels, six in number, from ports included in the aforesaid lists, have, with their crews, been personally visited and inspected by me immediately on arrival and before receiving pratique from the Customs' officials. In no instance have there been any sick or suspicious cases on board. The bilges have in each case been pumped out and disinfected, and the water tanks emptied and cleansed, and a fresh water supply provided by the Sanitary Authority in accordance with Article IV of the Cholera Order of 6th September, 1892. Three vessels, in ballast consisting of fresh water or river sand, and hailing respectively from St. Malo, Dunkirk and Hamburg, were compelled to discharge their ballast into the sea outside the harbour. My best thanks are due to the Principal Customs Officer for his courtesy in never failing to give me immediate information of the arrival of vessels from infected ports.

The efficiency of the means provided for promptly isolating cases of infectious disease occurring on board Ship has been during the past year put to the test and found wanting. On September 25th I received notification of the existence of a case of Diphtheria on board a small schooner of 80 tons burden, then lying in the harbour: owing to the hospital not being prepared for immediate reception of cases, and to the necessity of telegraphing to London for a nurse, a period of 24 hours elapsed before the patient could be removed from the forecastle of his vessel. This case furnished such a valuable lesson as to our unpreparedness to deal with a possible importation of Cholera, that I drew up a full report on the subject which was read on September 29th. The Port Sanitary Authority thereupon took steps to maintain their hospital in constant readiness. A trained nurse has been permanently engaged, who will reside on the premises, which she will keep always ready for use ; the general administration of the institution has been placed in my hands, together with the duty of professionally attending such patients as may be admitted. These changes have resulted in placing the hospital upon a fairly satisfactory working basis: and, although the building itself is open to much criticism, it may, I believe—except in so far as the drainage is concerned—be regarded as sufficient for the needs of the Port. The outfall of the hospital drain, just below low water mark, in what is a very favourite locality for the gathering of shellfish, constitutes however a possible source of grave danger: while the resolution of the Board, that when the Port hospital is unoccupied it may be available for the reception of patients from the Urban district, is, as already stated, in my opinion greatly to be deprecated. (See Page 14).

The absence of any disinfecting apparatus must again be alluded to, and regretted.

The total number of vessels entering the port during 1893 was 428, with a gross tonnage of 56,723. Of these 386 sailing vessels and 10 steamers came coastwise, the remaining 24 sailing vessels and 8 steamers being from foreign ports, principally Scandinavian and Danish. The number of vessels inspected was 143, including 22 from foreign ports; inspection being carried out by the Sanitary Inspector as well as myself in person. In six instances it has been necessary to order cleansing and whitewashing: with these exceptions all the vessels were found clean, the water storage good, and the forecastles in a satisfactory condition. One vessel, in which diphtheria occurred, was disinfected.

In view of the probable recrudescence of cholera during 1894, not only on the coast of Europe, but also, it may be, in our own ports, the need for unremitting activity in maintaining in the highest possible state of efficiency our Port Sanitary administration, cannot be too strongly insisted on.

F. CECIL H. PIGGOTT, M.D., B.C., AND B.A. CANTAB

MEDICAL OFFICER OF HEALTH.

January, 1894.

TEIGNMOUTH.

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